1968

Corn Insects -- Above Ground

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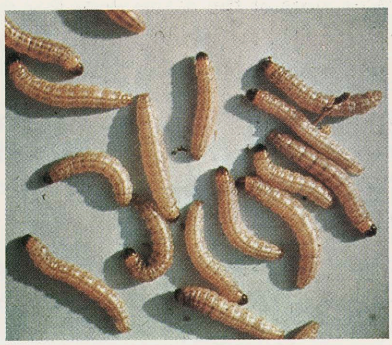
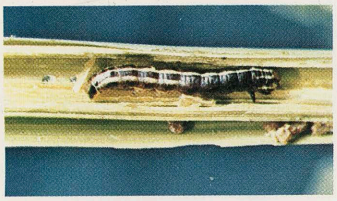
CORN INSECTS—ABOVE GROUND

For safe and effective use of insecticides, always identify the problem correctly.



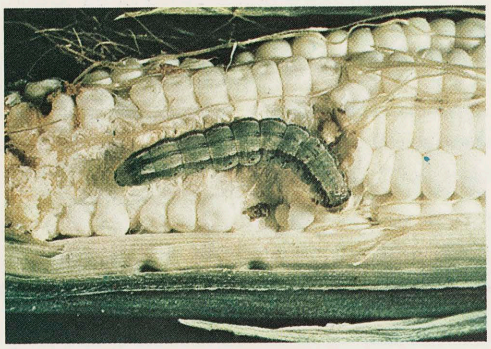
1. European corn borer (early leaf feeding and mature borers)

2. Southwestern corn borer

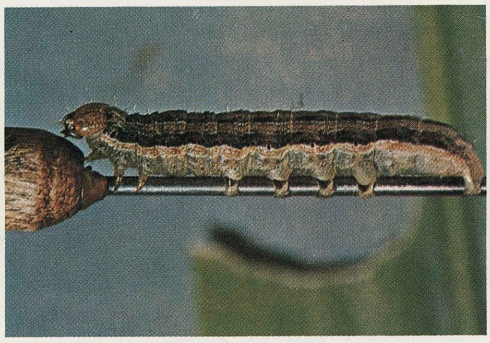


3. Common stalk borer

4. Chinch bug



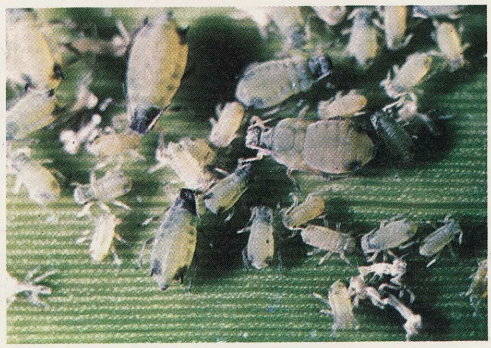
5. Corn earworm



6. Armyworm

7. Corn rootworm beetles (left to right: Northern, Western and Southern) These beetles clip silks causing poor pollination shown at far right.

8. Grasshopper



9. Corn leaf aphid

10. Corn flea beetle and damage

Prepared by Extension Entomologists of the North Central States in cooperation with the Federal Extension Service, U. S. Department of Agriculture

CORN INSECTS - ABOVE GROUND

B[illegible]. Kantack, Extension Entomologist, and Wayne L. Berndt, Extension Pesticide Specialist

1. EUROPEAN CORN BORER, Ostrinia nubilalis (Hubner). Corn borer larvae overwinter in the stalks and pupate in the spring. Moths emerge in June and lay eggs for the first brood in late June or early July in South Dakota. The eggs are in fish scale-like packets and are silvery white. They are deposited on the underside of the leaf. Newly hatched larvae feed on the leaves and in the whorl before boring into the plants. Whorl damage showing the shot-hole appearance shows up either the last week in June or first part of July. Controls for first brood are recommended when 50% or more of the plants show this shot-hole injury. The second brood usually occurs about 1 month later (late August). Controls are recommended for second brood when an accumulative count of 100 egg masses per 100 plants is recorded.

2. SOUTHWESTERN CORN BORER, Zeadiatraea grandiosella (Dyar). This insect at present is not known to occur in South Dakota but is of economic importance in Oklahoma, Missouri and other states to the south. The life cycle of this insect is similar to that of the European corn borer except the southwestern corn borer overwinters at the base of the stalk in the tap root. They girdle the inside of the stalk just above the ground level causing the plant to fall over.

3. COMMON STALK BORER, Papaipema nebris (Guenee). This insect is a general feeder and will attack nearly any soft-stemmed plant where the stem is large enough to afford a burrow. Larvae feed on corn whorls as well as boring into the stems causing a ragged appearance. Damage is usually confined to border rows where the borers have moved in from weedy areas. This insect overwinters in the egg stage on grasses and weeds.

4. CHINCH BUG, Blissus leucopterus (Say). Chinch bugs have not been a major problem on corn in South Dakota. This insect hibernates in the adult stage and is about 1/5 inch in size. Adults fly to small grain fields and lay eggs. The young nymphs crawl to nearby corn or sorghum fields as the grain ripens. A second generation may be produced on corn and sorghums.

5. CORN EARWORM, Heliothis zea (Boddie). Corn earworm can be found over all of South Dakota. Besides corn if feeds on soybeans, tomatoes, and other plants. The larvae vary in color and all shades of green and brown can usually be found. There are several generations a year. This insect is not known to overwinter in South Dakota and infestations result from migrating moths from states to the south.

6. ARMYWORM, Pseudaletia unipuncta (Haworth). Armyworms feed primarily on plants in the grass family. Eggs are laid in heavy, dense, grassy vegetation frequently along field borders and roadsides. As the worms mature they migrate in search of food. The winter is passed mainly in a partially grown larval stage. Predators, parasites and disease often help hold numbers of this insect down.

7. CORN ROOTWORM BEETLES, Diabrotica spp. Adult beetles, upon emergence from the soil, prefer to feed on corn silks but also are attracted to leaves and pollen. Large numbers of beetles feeding on silks during the pollination period may result in barren or partially barren ears. Eight to ten beetles per plant can clip silks sufficiently to interfere with proper pollination. Adult control measures should not be taken until the bulk of the field is in silk.

8. GRASSHOPPERS, Family Acrididae. Grasshoppers are general feeders and are usually prevalent in some areas of South Dakota each year. Heavy outbreaks or severe infestation occurs during seasons when hot and dry weather conditions prevail. The best time to control grasshoppers is when they are small and before they migrate into cropland areas. Apply control measures shortly after the main egg hatch is completed. Advantages of early treatment: (1) Fewer acres will have to be treated so cost will be less. (2) Injurious grasshoppers species are killed before they can injure the crop. (3) Early treatment before the grasshoppers reach maturity prevents egg deposition which helps reduce the potential grasshopper threat for the following year.

9. CORN LEAF APHID, Rhopalosiphum maidis (Fitch). This insect is dark green to greenish-blue, frequently occurs in large numbers on corn and sorghum whorls, tassels and upper leaves. Heavy numbers occurring in the whorls prior to tassel emergence may cause some injury. During most years predators and parasites help hold this insect in check.

10. CORN FLEA BEETLE, Family Chrysomelidae. These jumping beetles are quite small and shiny black in appearance. The beetles move from their hibernation quarters in grassland etc. into nearby corn fields and feed on the very young corn plants. Heavily infested plants turn grey as the leaves shrivel and die. Damage by this insect is usually more common during wet, cold springs when poor growing conditions prevail.

For further information on control of these pests consult your local county Extension agent, or the Extension Service, South Dakota State University, Brookings, South Dakota 57006.

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